

G.H.S. SARAKKI

[SUMATIVE ASSESMENT 2013 - 14] SA - 1 CLASS : 9

MARKS: 90

MATHEMATICS

TIME : 3 Hrs

NAME:

18 X 1 = 18

CHOOSE THE CORRECT ANSWER AND WRITE

1. The least number which must be subtracted from 65 to make it a perfect square.

- a. 2 b. 3 c. 4 d. 1

2. State the property associated with the following (a, b, c) are real numbers

a. $(b + c) = ab + ac$

- a. Closure property b. Associative property
c. Distributive property d. Commutative property.

3. Additive inverse of $-\frac{2}{3}$ is

- a. $-\frac{2}{3}$ b. $+\frac{2}{3}$ c. $+\frac{3}{2}$ d. $-\frac{3}{2}$

4. Identity element with respect to multiplication is

- a. 0 b. 1 c. -1 d. 2

5. The sum of $\sqrt{160 + 9}$ + $\sqrt{28 - 3}$

- a. 169 b. 25 c. 18 d. 194

6. If $A = \{5, 6, 7, 8\}$ $B = \{7, 8, 9\}$ then $A \cap B$ is

- a. $\{6, 8\}$ b. $\{7, 8\}$ c. $\{5, 7\}$ d. $\{5, 6\}$

7. The radicand in $\sqrt[3]{5}$ is

- a. 3 b. 5 c. 15 d. 2

8. Factors of $(x^3 + 1)$ are,

- a. $(x + 1)(x^2 + 1)$ b. $(x - 1)(x^2 + x + 1)$
c. $(x^3 + 1)(x^3 - 1)$ d. $(x + 1)(x^2 - x + 1)$

9. Co-efficient of x^2 in $(x + 2)(x + 3)(x + 4)$

- a. 10 b. 11 c. 30 d. 5

10. L.C.M. of $18x^3y^4z^9$ and $15x^4y^7z^5$ is

- a. $90x^3y^7z^5$ b. $90x^4y^7z^9$ c. $90x^4y^4z^9$ d. $90x^3y^4z^5$

11. HCF of $10a^2b^2c^2$, $15ab^2c^3$, $20ab^3c^2$ is

- a. $10a^2b^2c^2$ b. $15ab^2c^2$ c. $20ab^2c^2$ d. $5ab^2c^2$

12. HCF of ab, bc and ca is

- a. 1 b. abc c. $a^2b^2bc^2$ d. ab^2c^2 .

13. Identify the concave polygon

- a.  b.  c.  d. 

14. Area of a parallelogram whose base is 8cm and the corresponding altitude is 5cm.

- a. 20 Sqcm. b. 40 Sqcm. c. 25 Sqcm. d. 20 Sqcm.

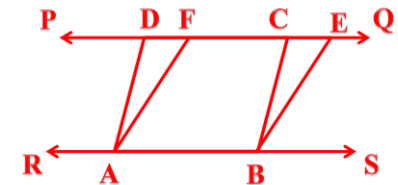
15. In a parallelogram if one of the angles is 90° then it is called.

- a. Rectangle b. Square c. Rhombus d. Trapezium

16. In the given figure, Area of \square ABCD = 300 Sqcm then

the area of \square ABEF is

- a. 150 Sqcm. b. 200 Sqcm.
c. 300 Sqcm. d. 100 Sqcm.



17. Three angles of a quadrilateral are equal,

the fourth angle is 150, then measure of each equal angle is

- a. 30 b. 210 c. 50 d. 30

18. PQRS is a parallelogram in which

$\angle RSQ = 40^\circ$ then $\angle SQP =$

- a. 40° b. 80° c. 90° d. 140°

II. Fill in the blanks:

1. The sets formed by taking elements from the universal set-----

2. $(x + 5)$ is one of the factor of $x^2 - 25$. then the other factor is-----

3. Divisor x Quotient + Remainder = -----

4. $(x + a)(x + b) =$ -----

$$1 \times 9 = 9$$

5. HCF of 2, 3, and 5 is -----

6. If a perfect square number has 'n' digits then its square root has ----- digits [if 'n' is odd]

7. The number of elements required to construct a quadrilateral is ----

8. The diagonals of a Rhombus bisect each other at -----

9. Exterior angle of a polygon d = -----

$$2 \times 16 = 32$$

III. Answer the following :

1. Find the square root by division method 28224

2. Find the square root of 12 [correct to two decimal point]

3. What is non-terminating recurring decimal ? Give Exmple.

4. Represent $\sqrt{3}$ on the number line .

5. Classify the following into like surds.

$$\sqrt{243}, \sqrt{128}, \sqrt{75}, \sqrt{243}, \sqrt{72}, \sqrt{54}$$

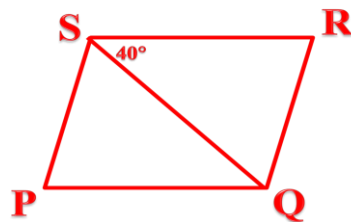
6. $A = \{ x/x \text{ is a multiple of } 5 \text{ and } x \leq 10 \}$

$B = \{ x/x \text{ is a multiple of } 3 \text{ and } x \leq 10 \}$

Find $A \cup B$ and $A \cap B$

7. Expand $(\sqrt{5} + \sqrt{2})^2$

8. Find the Product of $(x + 4)(x + 5)(x + 2)$ using suitable identity.



9. Resolve into factors $x^4 + y^4 - 7x^2y^2$.

10. Factorise $a^3 - b^3 + 8c^3 + 6abc$.

11. Find the H.C.F. of the following pairs of polynomials : $a^2 - 1$ and $3a - 3$

12. In a hexagon find in degrees, the sum of the interior and sum of the exterior angles.

13. Construct a quadrilateral given $AB = 4.8\text{cm}$ $BC = 4.4\text{cm}$ $CD = 7\text{cm}$ and $DA = 3.4\text{cm}$ $BD = 6.2\text{cm}$.

14. Differentiate parallelogram and a trapezium.

15. Find the area of a parallelogram in which base is 5 cm and altitude is 7 cm .

16. Construct a parallelogram ABCD given $AD = 4.2\text{cm}$ $DC = 5.8\text{cm}$ and $\angle 45^\circ$

17. A square garden has area 900m² additional land measuring equal area surrounding it has been added to it . If the resulting plot is also in the form of a square what is its side correct to two decimal places.

18. Write the following in the ascending order: $\sqrt[3]{2}$, $\sqrt{2}$, $\sqrt[5]{5}$

19. If $a + b + c = 0$ prove that $\frac{a^2}{bc} + \frac{b^2}{ac} + \frac{c^2}{ab} = 3$

$$3 \times 5 = 15$$

20. Factorize : $8p^3 + 27c^3$.

21. Construct a rhombus where diagonals are 4cm and 5cm.

22. $U = \{ 1, 2, 3, 4, 5, 6, 7, 8, 9 \}$ $A = \{ 1, 2, 3, 4 \}$ $B = \{ 2, 4, 6, 8 \}$ verify

$$(A \cup B)^c = A^c \cap B^c$$

23. Calculate the mean deviation for the following scores.

15, 11, 13, 20, 26, 18, 21

24. Find the L.C.M. of $x^2 - 3x - 4$, $x^2 + 2x - 24$

$$4 \times 4 = 16$$

25. Prove that the area of parallelograms on the same base and between the same parallels are equal.

PHONE NO 9844237817[KGS, SAS, HVS]

BLUE PRINT GOVERNMENT HIGH SCHOOL -

YEAR 2013 - 14

CLASS : 9 STD

SUBJECT : MATHEMATICS .

S L. N O	UNITS	KNOWLEDGE					UNDERSTANDING					APPLICATION					SKILL					MARKS	QNS
	CHAPTER 1	MC	1	2	3	4	MC	1	2	3	4	M C	1	2	3	4	M C	1	2	3	4		
1	SQUARE ROOT						1[2]		2[2]						1[1]							9	5
2		REAL NOS	1[2]		2[1]								1[1]							2[1]			7
3	SURDS	1[1]			1[1]				2[1]													6	3
4	SETS				4[1]		1[1]	1[1]	2[1]													8	4
5.	STATISTICS																						
	CHAP - 3																						
1	×LN OF POLY NOM		1[1]							3[1]		1[2]	1[1]	2[2]								11	7
2	FACT0RIZN						1[1]							2[2]	3[1]							8	4
3	HCF& LCM	1[3]	1[1]					1[1]						2[1		4[1]		1[1]				12	8

]										
	CHAP - 4																							
1	POLYGON	1[1]	1[1]									1[1]		2[1]								5	4	
2	QDTLTS	1[1]					1[1]	1[1]											2[1]		3[1]	8	5	
3	THEOREM	1[1]							2[1]		4[1]	1[1]		2[1]					2[1]			12	6	

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